

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A location system for determining the location of a tagged item telemetry device in a facility, the location system comprising:

a plurality of room transmitters capable of being located throughout the facility, each room transmitter having a unique, modulated signature;

at least one location receiver;

at least one telemetry device operable to acquire physiologic data, the telemetry device including

at least one item tag operable to be associated with an item and having, an identity,

a receiver operable to receive the signatures of the room transmitters,

a processor operable to combine the physiologic data, the identity, and the signature into a signal, and

a transmitter to regularly send a the signal to the location receiver, having information related to the signature of a room transmitter within the reception range of the item tag and information related to the identity of the item tag; and wherein the location receiver is operable at least one locating receiver tuned to receive the signal of the at least one item tag and to determine the identity of the item tag telemetry device and the likely location of the item-tag telemetry device within the facility.

2. (Currently amended) A system as claimed in claim 1, further comprising a control computer coupled to the at least one ~~locating~~ location receiver and operable to generate an output indicative of the location of the at least one ~~item-tag~~ telemetry device.

3. (Currently amended) A system as claimed in claim 1, further comprising at least two ~~item-tags~~ telemetry devices.

4. (Currently amended) A system as claimed in claim 1, further comprising at least two ~~locating~~ location receivers.

5. (Original) A system as claimed in claim 1, wherein each of the plurality of room transmitters includes a power supply, a control circuit, a tone generator, and a transducer.

6. (Currently amended) A system as claimed in claim 5, wherein the at least one ~~item~~ tag telemetry device includes a transducer, an identification module, a power supply, and a control circuit coupled to the transmitter.

7. (Original) A system as claimed in claim 1, wherein each of the plurality of room transmitters includes a power supply, a control circuit, a pulse generator, and an infrared device.

8. (Currently amended) A system as claimed in claim 7, wherein the at least one ~~item~~ tag telemetry device includes an infrared sensor, an identification module, a power supply, and a control circuit coupled to the transmitter.

9. (Currently amended) A system as claimed in claim 1, wherein the ~~locating~~ location receiver includes a signal receiver, an identity decoder, and a signature analyzer, the identity decoder and signature analyzer each coupled to the signal receiver.

a 10. (Original) A system as claimed in claim 1, wherein one or more of the plurality of room transmitters includes a housing with a grill and electrical connectors configured to fit in an electrical outlet.

11. (Original) A system as claimed in claim 1, wherein one or more of the plurality of room transmitters includes a face plate with a grill and is designed to fit within the recess of an electrical outlet.

12. (Original) A system as claimed in claim 1, wherein one or more of the plurality of room transmitters includes a housing with a window and electrical connectors configured to fit in an electrical outlet.

13. (Original) A system as claimed in claim 1, wherein one or more of the plurality of room transmitters includes a face plate with a window and is designed to fit within the recess of an electrical outlet.

14. (Original) A system as claimed in claim 1, wherein each of the plurality of room transmitters includes a PLC circuit.

15. (Original) A system as claimed in claim 1, wherein two or more of the plurality of room transmitters include a secondary receiver.

16. (Original) A system as claimed in claim 15, wherein each secondary receiver is an RF receiver.

a' 17. (Original) A system as claimed in claim 15, wherein each secondary receiver is an ultrasonic receiver.

18. (Currently amended) A location system for determining the location of a ~~tagged item~~ portable device in a facility, the location system comprising:

a plurality of room transmitters capable of being located throughout the facility, each room transmitter having a power supply, a control circuit, a transmitter driver, and a transmitter, the control circuit and transmitter driver operable to generate a unique, modulated signature for each room transmitter;

a portable device operable to acquire physiologic data, the portable device including

~~at least one item tag operable to be associated with an item and having an~~ identification module,

a receiver operable to receive the signatures of the room transmitters,

a power supply,

a transmitter to regularly send a signal having information related to the signature of a room transmitter within the reception range of the item tag, the physiologic data, and information related to the identity of the ~~item tag~~ portable device, and

a control circuit coupled to the transmitter; and

at least one locating receiver operable to receive the signal of the ~~at least one item tag~~ portable device, the at least one locating receiver having an identity decoder, and a signature analyzer, the at least one locating receiver operable to determine the identity of the ~~item tag~~ portable device and the likely location of the ~~item tag~~ portable device within the facility.

19. (Original) A system as claimed in claim 18, wherein one or more of the plurality of room transmitters includes a housing with a grill and electrical connectors configured to fit in an electrical outlet.

20. (Original) A system as claimed in claim 18, wherein one or more of the plurality of room transmitters includes a face plate with a grill and is designed to fit within the recess of an electrical outlet.

21. (Original) A system as claimed in claim 18, wherein one or more of the plurality of room transmitters includes a housing with a window and electrical connectors configured to fit in an electrical outlet.

22. (Original) A system as claimed in claim 18, wherein one or more of the plurality of room transmitters includes a face plate with a window and is designed to fit within the recess of an electrical outlet.

23. (Original) A system as claimed in claim 18, wherein each of the plurality of room transmitters includes a PLC circuit.

a 24. (Original) A system as claimed in claim 18, wherein two or more of the plurality of room transmitters includes a secondary receiver.

25. (Original) A system as claimed in claim 24, wherein each secondary receiver is an RF receiver.

26. (Original) A system as claimed in claim 24, wherein each secondary receiver is an ultrasonic receiver.

27. (Currently amended) A method of locating an item in a facility, the method comprising:

positioning a number of room transmitters in multiple areas within a facility;
configuring each room transmitter to generate a unique, modulated signature;
fitting one or more items with a location tag, at least one of the items operable to acquire physiologic data from a patient associated with the item;
configuring each location tag to regularly generate a signal having information regarding the identity of the location tag, the physiologic data, and the signature of any room transmitter within a reception range of the respective tag;
positioning at least one locating receiver within the facility; and
determining the likely location and identity of the location tag based on the signal of the location tag.

a1 28. (Original) A method as claimed in claim 27, further comprising coupling a control computer to the at least one locating receiver and generating an output indicative of the location and identity of the location tag.

29. (Original) A method as claimed in claim 27, further comprising synchronizing the room transmitters within a room so that each room transmitter sends a unique, time dependent signal.

30. (Original) A method as claimed in claim 29, further comprising configuring a first room transmitter to send a time varying signal that varies between a first frequency and a second frequency and configuring a second room transmitter to send a time varying signal that varies between a third frequency and a fourth frequency during the same time that the first transmitter sends its time varying signal.

31. (Original) A method as claimed in claim 30, further comprising determining the location of a location tag based on the offset of the time varying signals from the first and second room transmitters.

32. (Original) A method as claimed in claim 27, further comprising configuring each room transmitter with a secondary receiver.

33. (Original) A method as claimed in claim 32, further comprising sending a signal from at least one locating receiver to each room transmitter.

34. (Original) A method as claimed in claim 33, further comprising
sending a synchronization code to each room transmitter that causes each room transmitter to transmit its respective signature signal at a known time; and
determining the location of a location tag based on the time that the location tag receives signature signals from the room transmitters.

35. (Original) A method as claimed in claim 27, further comprising configuring each room transmitter with a PLC circuit.

36. (Original) A method as claimed in claim 27, further comprising positioning a reference tag in a location within the facility.

37. (Original) A method as claimed in claim 36, further comprising configuring the reference tag to transmit a reference signal on a periodic basis.

38. (Original) A method as claimed in claim 27, further comprising configuring each room transmitter to listen for signals from other room transmitters.

39. (Currently amended) A method of locating an item in a facility, the method comprising:

- positioning a number of room transmitters in multiple areas within a facility;
- configuring each room transmitter to generate a unique, modulated signature;
- fitting one or more items with a location tag, at least one of the items operable to acquire physiologic data;
- distributing the tagged items throughout the facility;
- configuring each location tag to have an identity, to regularly transmit its identity, and the physiologic data, and to regularly retransmit the signature or a representation of the signature of any room transmitter within a reception range of the respective tag;
- positioning at least one locating receiver within the facility; and
- determining the likely location and identity of at least one of the location tags based on transmissions from that location tag received by the locating receiver.

a 40. (Original) A method as claimed in claim 39, further comprising generating an output indicative of the location and identity of the location tag.

41. (Original) A method as claimed in claim 39, further comprising synchronizing the room transmitters within an area within the facility so that each room transmitter sends a unique, time dependent signal.

42. (Original) A method as claimed in claim 39, further comprising configuring a first room transmitter to send a time varying signal that varies between a first frequency and a second frequency and configuring a second room transmitter to send a time varying signal that varies between a third frequency and a fourth frequency during the same time that the first transmitter sends its time varying signal.

43. (Original) A method as claimed in claim 42, further comprising determining the location of a location tag based on the offset of the time varying signal from the first and second room transmitters.

44. (Original) A method as claimed in claim 39, further comprising configuring each room transmitter with a secondary receiver.

45. (Original) A method as claimed in claim 44, further comprising sending a signal from at least one locating receiver to each room transmitter.

46. (Original) A method as claimed in claim 45, further comprising
sending a synchronization code to each room transmitter that causes each room transmitter to transmit its respective signature signal at a known time; and
determining the location of a location tag based on the time that the location tag receives the signature signals from the room transmitters.

47. (Original) A method as claimed in claim 39, further comprising configuring each room transmitter with a PLC circuit.

48. (Original) A method as claimed in claim 39, further comprising positioning a reference tag in a location within the facility.

a 49. (Original) A method as claimed in claim 48, further comprising configuring the reference tag to transmit a reference signal on a periodic basis.

50. (Original) A method as claimed in claim 49, further comprising configuring each room transmitter to listen for signals from other room transmitters.

51. (Currently amended) A location system for determining the location of ~~an item~~ a patient in a facility, the location system comprising:

a plurality of room transmitters capable of being located throughout the facility, each room transmitter having a unique, modulated signature;

at least one tag operable to be associated with an item, the item operable to acquire patient data, the at least one tag including and having

an identity,

a receiver operable to receive the signatures of the room transmitters, and

a transmitter to regularly send a signal having information related to the signature of a room transmitter within the reception range of the tag, the patient data, and information related to the identity of the tag; and

at least one ~~locating~~ location receiver operable to receive the signal of the at least one tag and to determine the identity of the tag and the likely location of the tag patient within the facility.

52. (Original) A system as claimed in claim 51, wherein the at least one tag is incorporated in a telemetry device.

53. (Original) A system as claimed in claim 52, wherein the telemetry device includes at least one signal conditioner to condition a telemetry input;
a filter and mixer coupled to the receiver of the tag;
a multi-channel combiner coupled to the transmitter of the tag; and
a switch coupled between the at least signal conditioner, filter and mixer, and the multi-channel combiner.

54. (Added) A method of locating an item in a facility, the method comprising:

- positioning a number of room transmitters within a facility;
- synchronizing the room transmitters within an area of the facility so that each room transmitter generates a unique, time dependent signal wherein a first room transmitter is configured to send its unique, time dependent signal which varies between a first frequency and a second frequency and wherein a second room transmitter is configured to send its unique, time dependent signal which varies between a third frequency and a fourth frequency during the same time that the first transmitter sends its time dependent signal;
- fitting one or more items with a location tag;
- distributing the tagged items throughout the facility;
- configuring each location tag to have an identity, to transmit its identity, and to retransmit the unique, time dependent signal of any room transmitter within a reception range of the respective location tag;
- positioning at least one location receiver within the facility, the location receiver operable to receive the unique, time dependent signals from the location tag; and
- determining the location and identity of at least one of the location tags based on the offset of the time dependent signals from the first and second room transmitters.

INTERVIEW SUMMARY

This Interview Summary is further to the Examiner's Interview with the undersigned Applicants' Representative on December 18, 2003. A Proposed Amendment was submitted prior to the Interview. During the Interview, independent Claim 1 (as amended in the Proposed Amendment), U.S. Patent No. 5,917,425 ("Crimmins"), and U.S. Patent No. 5,694,453 ("Fuller") were discussed. Applicants' Representative pointed out that Crimmins and Fuller do not teach or suggest all of the limitations of amended Claim 1. In particular, it was noted that Crimmins and Fuller do not teach or suggest at least one telemetry device operable to acquire physiologic data. The Examiner indicated that a new search would need to be performed in light of the proposed claim amendments. An agreement with respect to Claim 1 was not reached during the Interview, however, it was generally agreed that Crimmins and Fuller do not teach or suggest telemetry devices that acquire physiologic data.